

CLAIMS

1. An input control system for an automatic wafer transfer within a physical wafer processing system comprising:

a display device with a graphical user interface for displaying indicia relating to the transfer of one or more wafers to and from a wafer carrier used in the wafer processing system; and

said display device being further configured to allow a user to graphically select said indicia to direct the transfer of one or more of said wafers between a wafer cassette and wafer carrier whereby said graphical selection causes physical transfer of said selected one or more wafers.

2. The input control system of claim 1 wherein said indicia comprises graphical control elements corresponding to physical control elements whereby said graphical control elements control said physical control elements.

3. The input control system of claim 2 wherein said indicia further includes wafer graphics representative of physical wafers and a destination graphic representative of one or more physical elements for holding the wafers, and said graphical user interface allowing selection of one or more of said wafer graphics and dragging said selected wafer graphics to said destination graphic using a pointing device to effect physical transfer of said selected wafers.

4. The input control system of claim 3 wherein said destination graphic is a wafer cassette slot graphic.

5. The input control system of claim 3 wherein said destination graphic is a wafer carrier graphic.

6. The input control system of claim 3 wherein said destination graphic is a wafer pocket graphic.

7. A wafer transfer controller for a wafer transfer system, comprising:

a display for displaying graphical user interface elements corresponding to physical elements of the wafer transfer system; and

an interface for enabling a user to cause said graphical interface elements to initiate a physical wafer transfer between a wafer storage cassette and a wafer processing carrier.

8. The wafer transfer controller according to claim 7, wherein said interface allows for receiving commands from said user.

9. The wafer transfer controller according to claim 8, wherein said commands are input by said user using a pointing device.

10. The wafer transfer controller according to claim 9, wherein said user commands comprise a graphical element on said display selected with said pointing device.

11. The wafer transfer controller according to claim 10, wherein said graphical elements comprise:

- at least one antechamber graphic;

- at least one wafer cassette graphic, each said wafer cassette graphic including at least one wafer slot graphic;

- at least one wafer graphic and

- at least one wafer carrier graphic, each said wafer carrier graphic including at least one wafer pocket graphic.

12. The wafer transfer controller according to claim 11, wherein each said antechamber graphic further comprises:

- an outer door graphic;

- an inner door graphic;

- an area for said wafer cassette graphic; and

- and a wafer slot indicator graphic to indicate which wafer slot graphic is selected by said user.

13. The wafer transfer controller according to claim 12, wherein a wafer graphic is selected by said user on said display and is dragged to a destination graphic to cause said corresponding physical wafer transfer initiation.

14. The wafer transfer controller according to claim 13, wherein said destination graphic is one of said at least one wafer carrier graphic.

15. The wafer transfer controller according to claim 13, wherein said destination graphic is one of said at least one wafer pocket graphic.

16. The wafer transfer controller according to claim 13, wherein said destination graphic is one of said at least one wafer cassette slot graphic.

17. A method for a user to control the physical transfer of wafers between wafer cassettes and carriers in a wafer processing system using a graphical user interface comprising:

displaying on the graphical user interface one or more wafer graphics representative of the wafers, one or more wafer cassette graphics representative of the wafer cassettes and one or more wafer carrier graphics representative of the wafer carriers;

selecting at least one wafer graphic;

dragging said at least one selected wafer graphic to a destination graphic;

placing said at least one selected wafer graphic over a predetermined location on said destination graphic; and

releasing said selected at least one wafer graphic.

18. The method for transferring wafers according to claim 17 further comprising:

physically transferring at least one wafer corresponding to said at least one selected wafer graphic.

19. The method for transferring wafers according to claim 18 wherein selecting further comprises:

placing a pointer of a pointing device over a wafer graphic; and

acknowledging said pointing device pointer position.

20. The method for transferring wafers according to claim 19 wherein said releasing further comprises acknowledging said pointing device pointer position.

21. An input control apparatus to control wafer transfer between a wafer cassette and a wafer carrier in a wafer transfer system comprising:

a computer system including a processor, a display device, an input device and a software program operative under control of said processor, said computer and said software program being operative to create a graphical user interface for display on said display device;

said graphical user interface including graphical representations of the wafer transfer system, at least one wafer graphic, at least one wafer cassette slot graphic and at least one wafer carrier graphic; and

said input device allowing a user to graphically select said at least one wafer graphic and place said selected wafer graphic on a destination graphic whereby said graphical selection and placement causes physical transfer of a corresponding wafer to a corresponding destination of the wafer transfer system.

22. The input control system of claim 21 wherein said destination graphic is a wafer cassette slot graphic.

23. The input control system of claim 21 wherein said destination graphic is a wafer carrier graphic.

24. The input control system of claim 23 wherein said destination graphic is a wafer pocket graphic.

25. A computer usable medium having computer readable instructions stored therein for causing a processor in a computer system to generate a graphical user interface for use in the physical transfer of wafers between a wafer cassette and a wafer carrier in a wafer transfer system, the instructions comprising instructions for:

displaying on the graphical user interface one or more wafer graphics representative of the wafers, one or more wafer cassette graphics representative of the wafer cassettes and one or more wafer carrier graphics representative of the wafer carriers;

allowing user selection of at least one wafer graphic;

allowing graphical movement of at least one selected wafer to a destination graphic by dragging said at least one selected wafer graphic to a destination graphic;

allowing user placement of said at least one selected wafer graphic over a predetermined location on said destination graphic; and

allowing user confirmation of said placement by releasing said selected at least one wafer graphic.

26. The computer usable medium according to claim 25 further comprising:

allowing for a user to control the physical transfer of at least one wafer corresponding to said at least one selected wafer graphic.

27. An input control apparatus to control wafer transfer between a wafer cassette and a wafer carrier in a wafer transfer system comprising:

a computer system including a processor, a display device, an input device and a software program operative under control of said processor, said computer and said software program being operative to create a graphical user interface for display on said display device;

said graphical user interface including graphical representations of the wafer transfer system, at least one wafer graphic, at least one wafer cassette slot graphic and at least one wafer carrier graphic; and

said input device allowing a user to graphically select groups of wafer graphics and place said selected groups of wafer graphics on a destination graphic whereby said graphical selection and placement causes physical transfer of a corresponding group of wafers to a corresponding destination of the wafer transfer system.